

What is claimed is:

- sub 1* 1. A computerized method of controlling one or more IMDs deployed in one or more patients, said IMDs having firmware or software, comprising the steps of:
- 5 transmitting via a network communication link historical physiologic data gathered from at least one of the IMDs to a centralized computing resource external to any patient;
- analyzing the physiologic data so transmitted according to a suitable physiologic model;
- 10 determining instructions comprising an IMD treatment regimen based on the results of the analysis of the physiologic data; and
- transmitting via a network communication link the instructions to the appropriate IMD for execution by the IMD in accordance with its firmware or software.
- 15 2. The method of claim 1, wherein the network communication link comprises a radio frequency link.
- 20 3. The method of claim 2, wherein the network communication link comprises a hybrid link.
4. The method of claim 3 wherein the hybrid link comprises a radio frequency link from an IMD to a routing instrument, and a secondary network link from the routing device to the central computing resource.
- 25 5. The method of claim 4 wherein the secondary network link is a direct dial up connection.
- 30 6. The method of claim 4 wherein the secondary network link is an area network.

03740000 4 1 1 000

7. The method of claim 6 wherein the area network is a LAN.
8. The method of claim 6 wherein the area network is a WAN.
- 5 9. The method of claim 6 wherein the area network is one of internet, intranet, extranet or world wide web.
- 10 10. The method of claim 4, wherein the secondary network communication link comprises an asynchronous link.
11. The method of claim 4, wherein the secondary network communications link comprises a synchronous link.
12. The system of claim 1, wherein the one or more IMDs comprises
15 one or more of a pacemaker, a PCD pacemaker/cardioverter/defibrillator, an oxygen sensing device, a nerve stimulator, a muscle stimulator, a drug pump, or an implantable monitoring device.
13. The computerized method of claim 1, comprising the further step of
20 transmitting from a centralized computing resource to one or more IMDs an upgrade to the IMD firmware or software.
14. A computerized information network system linking one or more
25 IMDs deployed in one or more patients to a centralized external computer via a data communication network, said network comprising:
- a central computing resource accessible by the network, said central computing resource capable of applying a physiologic model to patient data recorded by an IMD;
 - at least one routing instrument capable of wireless communication with at
30 least one IMD deployed in a patient, said routing instrument being capable of communication with the network.

15. The computerized network of claim 13, wherein the network comprises a direct link between the at least one routing instrument and the central computing resource.

5 16. The computerized network of claim 13, wherein the central computing resource comprises a supercomputer.

10 17. The computerized network of claim 13, wherein the central computing resource comprises a multi-processor workstation.

18. The computerized network of claim 13, wherein the central computing resource comprises a networked cluster of computers.

15 19. The system of claim 13, wherein the data communication is asynchronous.

20. The system of claim 13, where the data communication is synchronous.

Add B2